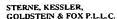
Remarks

I. Support for Amendments

Support for the foregoing amendments to the claims, and for new claims 143-150, can be found throughout the specification. Specifically, support for the amendment to claim 7 can be found in claims 1 and 7 as originally filed, at pages 53-57 and throughout Examples 1-7. The amendment to claim 35 is supported in claims 23 and 35 as originally filed, at pages 53-57 and throughout Examples 1-7. Support for the amendment to claim 40 can be found in claims 23, 38 and 40 as originally filed. The amendment to claim 42 is supported in claims 23 and 42 as originally filed. Support for the amendment to claim 69 can be found in claims 64 and 69 as originally filed, and at page 142, lines 25-29; at page 143, lines 1-4; and throughout Examples 1-7. The amendment to claim 108 is supported in the specification, at page 12, lines 11-13 and throughout Examples 1-7. The amendment to claim 115 is supported in the specification, at page 63, lines 14-29, and at page 64, lines 1-4. Support for new claims 143-144 can be found throughout the specification, specifically at page 12, lines 11-13 and throughout Examples 1-7; and support for claims 145-150 can be found at pages 16-22; at pages 44-46; in Fig. 14A; in Example 6; and in claims 108-112 as originally filed. Hence, these amendments do not add new matter to the application, and their entry and consideration are respectfully requested.



A

II. Status of the Claims

By the foregoing amendments, claims 1-6, 9-21, 23-34, 38, 39, 43-46, 55-68, 70-76, 101, 102 and 124-142 haven been cancelled without prejudice or disclaimer. Claims 7, 35, 40, 42, 69, 108 and 115 have been amended, and new claims 143-150 are sought to be entered. These amendments do not add new matter. Upon entry of the foregoing amendments, claims 7, 8, 22, 35-37, 40-42, 47-54, 69, 77-100, 103-123, and 143-150 are pending in the application, with claims 7, 22, 35, 47, 48, 50, 69, 77, 108, 115, 120 and 145 being the independent claims.

III. Summary of the Office Action

In the Office Action dated July 1, 2002, the Examiner has made one objection to, and twelve rejections of, the claims. Applicants respectfully offer the following remarks to overcome or traverse each of these elements of the Office Action.

IV. The Double Patenting Rejections

In the Office Action at pages 3-4, the Examiner has rejected claims 1-6, 11-16, 21, 23-30, 32, 38, 39, 43-45, 56, 62-68, 70-73 and 76 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 6, 22 and 23 of commonly owned U.S. Patent No. 6,277,608 ("the '608 patent"). Applicants respectfully traverse this rejection. However, solely to expedite prosecution, and not in acquiescence to this rejection, claims 1-6, 11-16, 21, 23-30, 32, 38, 39, 43-45, 56, 62-68, 70-73 and 76 have been canceled. Thus this rejection has been rendered moot.



a

The Examiner has also rejected claims 1, 2, 4, 6, 11-16, 21, 23, 24, 27, 38, 39, 43-45, 56, 62-68, 70-73 and 76 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 30 of commonly owned U.S. Patent No. 5,88,732 ("the '732 patent"). Applicants respectfully traverse this rejection. However, solely to expedite prosecution, and not in acquiescence to this rejection, claims 1, 2, 4, 6, 11-16, 21, 23, 24, 27, 38, 39, 43-45, 56, 62-68, 70-73 and 76 been canceled. Thus this rejection has been rendered moot.

V. The Rejection Under 35 U.S.C. § 102(b) Over Scott

In the Office Action at pages 4-5, the Examiner has rejected claims 1, 7, 8 and 17-19 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,814,300 to Scott *et al.* (Doc. E cited on the Form PTO-892 attached to Paper No. 11; hereinafter "Scott"). Applicants respectfully traverse this rejection. However, solely to expedite prosecution, and not in acquiescence to this rejection, claims 1, 17 and 19 have been cancelled. Thus, the portion of this rejection that may have applied to these claims has been rendered moot. Applicants also respectfully traverse this rejection as it may be applied to claims 7 and 8.

Claim 7 (and claim 8 that depends ultimately therefrom and that is also rejected over Scott) recites a method of producing a population of hybrid nucleic acid molecules comprising: (a) mixing at least a first population of nucleic acid molecules, wherein one or more nucleic acid molecules of said population comprises one or more recombination sites, with at least one target nucleic acid molecule comprising one or more recombination sites; (b) causing some or all of the nucleic acid molecules of the at least first population to recombine

with all or some of the target nucleic acid molecules, thereby forming the population of hybrid nucleic acid molecules; and (c) selecting for the population of hybrid nucleic acid molecules and against the first population of nucleic acid molecules and against the target nucleic acid molecules. In contrast, Scott does not disclose the use or production of populations of nucleic acid molecules and instead only discloses the use and production of single DNA constructs (see Scott at column 3, lines 49-51). Hence, Scott does not disclose at least one element of the claimed invention.

Under 35 U.S.C. § 102, a claim can only be anticipated if every element in the claim is expressly or inherently disclosed in a single prior art reference. *See Kalman v. Kimberly Clark Corp.*, 713 F.2d 760, 771 (Fed. Cir. 1983), *cert. denied*, 465 U.S. 1026 (1984). Since Scott does not expressly or inherently disclose one or more elements of the claimed invention, this reference cannot and does not anticipate claims 7 and 8. Therefore, reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(b) over Scott are respectfully requested.

VI. The Rejection Under 35 U.S.C. § 102(e) Over Piedrahita

In the Office Action at page 5,the Examiner has rejected claims 1, 7, 8 and 17-19 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,271,436 to Piedrahita *et al.* (Doc. B cited on the Form PTO-892 attached to Paper No. 11; hereinafter "Piedrahita"). Applicants respectfully traverse this rejection. However, solely to expedite prosecution, and not in acquiescence to this rejection, claims 1, 17 and 19 have been cancelled. Thus, the portion of this rejection that may have applied to these claims has been rendered moot. Applicants also respectfully traverse this rejection as it may be applied to claims 7 and 8.

(J.

As noted above, claim 7 (and claim 8 that depends ultimately therefrom and that is also rejected over Piedrahita) recites a method of producing a population of hybrid nucleic acid molecules comprising: (a) mixing at least a first population of nucleic acid molecules, wherein one or more nucleic acid molecules of said population comprises one or more recombination sites, with at least one target nucleic acid molecule comprising one or more recombination sites; (b) causing some or all of the nucleic acid molecules of the at least first population to recombine with all or some of the target nucleic acid molecules, thereby forming the population of hybrid nucleic acid molecules; and (c) selecting for the population of hybrid nucleic acid molecules and against the first population of nucleic acid molecules and against the target nucleic acid molecules. In contrast, Piedrahita does not disclose the use or production of populations of nucleic acid molecules. Rather, Piedrahita only discloses the use and/or production of single DNA segments (see Piedrahita column 23, lines 19-21). Hence, Piedrahita does not disclose each and every element of the claimed invention. Therefore, in view of Kalman, Piedrahita cannot anticipate claims 7 and 8, and reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) over Piedrahita are respectfully requested.

VII. The Rejection Under 35 U.S.C. § 102(e) Over Hartley

In the Office Action at pages 5-6, the Examiner has rejected claims 1-6, 11-16, 21, 23-34, 38, 39, 43-46, 56-60, 62-68, 70-73 and 76 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,277,608 to Hartley *et al.* (Doc. D cited on the Form PTO-892 attached to Paper No. 11; hereinafter "Hartley"). Applicants respectfully traverse this rejection.

However, solely to expedite prosecution, and not in acquiescence to this rejection, claims 1-6, 11-16, 21, 23-34, 38, 39, 43-46, 56-60, 62-68, 70-73 and 76 have been cancelled. Thus this rejection has been rendered moot.

VIII. The Rejection Under 35 U.S.C. § 102(e) Over Winter

In the Office Action at page 6, the Examiner has rejected claims 1-6, 11-16, 64-68, 70-73, 76, 108-112 and 120-123 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,871,907 to Winter *et al.* (Doc. C cited on the Form PTO-892 attached to Paper No. 11; hereinafter "Winter"). Applicants respectfully traverse this rejection. However, solely to expedite prosecution, and not in acquiescence to this rejection, claims 1-6, 11-16, 64-68, 70-73 and 76 have been cancelled. Thus, the portion of this rejection that may have applied to these claims has been rendered moot. Applicants also respectfully traverse this rejection as it may be applied to claims 108-112 and 120-123.

A. The Rejection of Claims 108-112

Claim 108 (and thus claims 109-112 that depend ultimately therefrom and that are also rejected over Winter) recites a method of synthesizing a protein comprising: (a) providing a nucleic acid molecule comprising at least one recombination site and comprising a coding sequence containing at least one suppressible stop codon; (b) providing a vector comprising at least one recombination site and a coding sequence; (c) causing recombination *in vitro* such that the nucleic acid molecule is inserted into the vector to produce a modified vector with the two coding sequences connected in frame and separated by said stop codon; (d) transforming

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A

a host cell which expresses a suppressor tRNA with the modified vector; and (e) causing expression of the two coding sequences such that a fusion protein encoded by at least a portion of both of the coding sequences is produced. Applicants note that Winter only mentions in passing *in vitro* Cre-catalysed recombination. However, Winter provides no experimental details to support such a statement, and all of the protocols in the Examples in Winter are limited to *in vivo* recombination wherein the recombination takes place inside of host cells (see Winter at column 14, lines 57-63, throughout column 15 and at column 29, lines 14-17). Applicants therefore respectfully assert that Winter does not disclose the claimed invention. However, even assuming arguendo that it did disclose the claimed invention, the disclosure of this document does not enable one of ordinary skill to make and use the presently claimed *in vitro* methods, since at best it only refers in passing to *in vitro* recombination while only exemplifying intracellular recombination methods, and provides no details on how *in vitro* recombination could or should be accomplished.

As the Federal Circuit has held, a claim can only be anticipated by a publication if the publication describes the claimed invention with sufficient enabling detail to place the public in possession of the invention. See In re Donohue, 766 F.2d 531, 533 (Fed. Cir. 1985); see also PPG Industries, Inc. v. Guardian Industries Corp., 75 F.3d 1558, 1566 (Fed. Cir. 1996) ("To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter.") Applicants respectfully submit that Winter does not disclose or enable the present invention. Hence, in view of Kalman, Donohue and PPG Industries, Winter does not anticipate claims 108-112 drawn to

in vitro methods. Reconsideration and withdrawal of the rejection of these claims under 35 U.S.C. § 102(e) over Winter are respectfully requested.

B. The Rejection of Claims 120-123

Claim 120 (and thus claims 121-123 that depend ultimately therefrom and that are also rejected over Winter) recites a method for preparing and identifying a nucleic acid molecule containing two or more nucleic acid segments which encode gene products involved in the same biological process or biological pathway comprising: (a) providing a first population of nucleic acid molecules comprising at least one recombination site capable of recombining with other nucleic acid molecules in the same in the first population; (b) contacting the nucleic acid molecules of the first population with one or more recombination proteins under conditions which cause the nucleic acid molecules to recombine and create a second population of nucleic acid molecules; and (c) screening the second population of nucleic acid molecules to identify a nucleic acid molecule which encodes two or more products involved in the same process or pathway. In contrast, Winter does not disclose the production and/or use of populations of nucleic acid molecules. Hence, Applicants respectfully submit that Winter fails to disclose each and every element of the invention of claims 120-123. Therefore, in view of Kalman, Winter cannot anticipate claims 120-123, and reconsideration and withdrawal of the rejection of these claims under 35 U.S.C. § 102(e) over Winter are respectfully requested.

(L

C. Summary

In view of the foregoing remarks, Applicants respectfully assert that claims 108-112 and 120-123 are not anticipated by Winter. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) over Winter therefore are respectfully requested.

IX. The Rejection Under 35 U.S.C. § 103(a) Over Hartley and Winter

In the Office Action at pages 7-8, the Examiner has rejected claims 23, 38 and 40-42 under 35 U.S.C. § 103(a) as being obvious over Hartley in view of Winter. Applicants respectfully traverse this rejection. However, solely to expedite prosecution, and not in acquiescence to this rejection, claims 23 and 38 have been cancelled. Thus, the portion of this rejection that may have applied to these claims has been rendered moot.

Applicants also respectfully traverse this rejection as it may be applied to claims 40-42 under 35 U.S.C. § 103(a). Effective November 29, 1999, "[s]ubject matter developed by another person, which qualifies as prior art only under subsection (e), (f), and or (g) of section 102 of this title, shall not preclude patentability under [35 U.S.C. § 103] where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person." 35 U.S.C. § 103(c). This statutory provision "applies to all utility, design and plant patent applications filed on or after November 29, 1999, including continuing applications filed under 37 C.F.R. § 1.53(b), continued prosecution applications filed under 37 C.F.R. § 1.53(d), and reissues." MPEP § 706.02(l)(1) (February 2000). Since the present application was filed on December 11, 2000, and has an earliest effective filing date of December 11, 1999, the

a

provisions of 35 U.S.C. 103(c) therefore apply to the present application. Applicants note that Hartley and the present invention were, at the time the present invention was made, owned by or subject to an obligation of assignment to a common assignee: Life Technologies, Inc. (predecessor in interest to Invitrogen Corporation, the assignee of the present application). Applicants respectfully assert that Hartley qualifies as prior art (if at all) only under § 102(e), as acknowledged by the Examiner in the present Office Action. Hence, under 35 U.S.C. § 103(c), Hartley is not available as prior art against the present invention under 35 U.S.C. § 103(a). The disclosure of Winter alone cannot support a prima facie case of obviousness. Thus, the required burden has not been met.

In view of the foregoing remarks, Applicants respectfully assert that claims 40-42 would not have been obvious over the disclosures of Hartley and Winter, alone or in combination. Reconsideration and withdrawal of the rejection of these claims under 35 U.S.C. § 103(a) therefore are respectfully requested.

X. The Rejection Under 35 U.S.C. § 103(a) Over Hartley and Winter and Hodges or Baszczynski

In the Office Action at pages 8-10, the Examiner has rejected claims 23, 38 and 40-42 under 35 U.S.C. § 103(a) as being obvious over Hartley in view of Winter and further in view of either U.S. Patent No. 5,527,695 to Hodges *et al.* (Doc. A cited on the Form PTO-892 attached to Paper No. 11; hereinafter "Hodges") or U.S. Patent No. 6,262,341 to Baszczynski *et al.* (Doc F cited on the Form PTO-892 attached to Paper No. 11; hereinafter "Baszczynski"). Applicants respectfully traverse this rejection. However, solely to expedite prosecution, and not in acquiescence to this rejection, claims 23 and 38 have been cancelled.

Thus, the portion of this rejection that may have applied to these claims has been rendered moot.

Applicants also respectfully traverse this rejection as it may be applied to claims 40-42. As noted above, under 35 U.S.C. § 103(c), Hartley is not available as prior art against the present application under 35 U.S.C. § 103(a). As also noted above, the disclosure of Winter cannot support a *prima facie* case of obviousness. Hodges provides no additional disclosure that would have cured the deficiencies in Winter, as Hodges only discloses additional recombination systems. Baszczynski also only discloses additional recombinases, which would not have cured the deficiencies in Winter. Thus, the burden required to sustain a *prima facie* case of obviousness has not been met.

In view of the foregoing remarks, Applicants respectfully assert that claims 40-42 would not have been obvious over the disclosures of Hartley, Winter, Hodges and Baszczynski, alone or in combination. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) over Hartley in view of Winter and further in view of Hodges or Baszczynski therefore are respectfully requested.

XI. The Rejection Under 35 U.S.C. § 103(a) Over Scott or Piedrahita and Hodges or Baszczynski

In the Office Action at pages 10-11, the Examiner has rejected claims 1, 7, 8 and 17-19 under 35 U.S.C. § 103(a) as being obvious over Scott or Piedrahita in view of Hodges or Baszczynski. Applicants respectfully traverse this rejection. However, solely to expedite prosecution, and not in acquiescence to this rejection, claims 1, 17 and 19 have been cancelled. Thus, the portion of this rejection that may have applied to these claims has been

rendered moot. Applicants also respectfully traverse this rejection as it may be applied to claims 7 and 8.

For the reasons discussed above, both Scott and Piedrahita are seriously deficient as primary references upon which to base an alleged *prima facie* case of obviousness of claims 7 and 8. For reasons also discussed above, Hodges and Baszczynski provide no disclosure that would cure these deficiencies in Scott and Piedrahita. Hence, one of ordinary skill would have found no suggestion or motivation to have combined the disclosures of these references. Thus, the burden required to sustain a *prima facie* case of obviousness has not been met.

In view of the foregoing remarks, Applicants respectfully assert that claims 7 and 8 would not have been obvious over the disclosures of Scott, Piedrahita, Hodges, and Baszczynski, alone or in combination. Reconsideration and withdrawal of this rejection under 35 U.S.C. § 103(a) over Scott or Piedrahita in view of either Hodges or Baszczynski therefore are respectfully requested.

In the Office Action at pages 11-12, the Examiner has rejected claims 1-6, 11-16, 21, 23-34, 38, 39, 43-46, 56-60, 62-68, 70-73 and 76 under 35 U.S.C. § 103(a) as being obvious over Hartley in view of either Hodges or Baszczynski. Applicants respectfully traverse this rejection. However, solely to expedite prosecution, and not in acquiescence to this rejection, claims 1-6, 11-16, 21, 23-34, 38, 39, 43-46, 56-60, 62-68, 70-73 and 76 have been cancelled. Thus this rejection has been rendered moot.

1

XIII. The Rejection Under 35 U.S.C. § 103(a) Over Winter and Hodges or Baszczynski

In the Office Action at pages 12-13, the Examiner has rejected claims 1-6, 11-16, 64-68, 70-73, 76, 108-112 and 120-123 under 35 U.S.C. § 103(a) as being obvious over Winter in view of either Hodges or Baszczynski. Applicants respectfully traverse this rejection. However, solely to expedite prosecution, and not in acquiescence to this rejection, claims 1-6, 11-16, 64-68, 70-73 and 76 have been cancelled. Thus, the portion of this rejection that may have applied to these claims has been rendered moot. Applicants also respectfully traverse this rejection as it may be applied to claims 108-112 and 120-123.

For the reasons discussed above, Winter is seriously deficient as a primary reference upon which to base an alleged *prima facie* case of obviousness with regard to claims 108-112 and 120-123. For reasons also discussed above, Hodges and Baszczynski provide no disclosure that would cure these deficiencies in Winter. Hence, one of ordinary skill would have found no suggestion or motivation to have combined the disclosures of these references. Thus, the burden required to sustain a *prima facie* case of obviousness has not been met.

In view of the foregoing remarks, Applicants respectfully assert that claims 108-112 and 120-123 would not have been obvious over the disclosures of Winter, Hodges and Baszcynski alone or in combination. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) over Winter in view of either Hodges or Baszczynski therefore are respectfully requested.

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

O

XIV. The Indefiniteness Rejection Is Accommodated

In the Office Action at page 13, the Examiner has rejected claims 115-119 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to clearly define to what process claim 115 is actually drawn. By the foregoing amendments, claim 115 has been amended to include: "(d) comparing the sequence of said joined nucleic acid molecules to nucleic acid sequences cataloged in public databases to identify the gene expression profile." As noted above, this amendment does not add new matter to the present application. Accordingly, Applicants respectfully assert that claim 115 clearly defines the method for determining the gene expression profile and as such clearly defines the metes and bounds of the claim.

With regard to the Examiner's assertion that in claim 115, "site" at line 5 should be "sites," Applicants thank the Examiner for this observation. Claim 115 has now been amended, thereby accommodating this portion of the rejection.

In view of the foregoing remarks, the rejection of claims 115-119 under 35 U.S.C. § 112, second paragraph, has been fully accommodated. Reconsideration and withdrawal of this rejection are therefore respectfully requested.

XV. Other Matters

Applicants note that at page 2 of the Office Action, the Examiner has objected to claims 35-37, 69, 113 and 114 for being dependent upon a rejected base claim, but states that these claims would be allowable if rewritten in independent form. With regard to claims 35-37 and claim 69, Applicants respectfully assert that this objection has been accommodated by

CHEO et al. Appl. No. 09/732,914

- 23 -

the forgoing amendments to claims 35 and 69. With regard to claims 113 and 114, Applicants

acknowledge this identification of provisionally allowable subject matter. However, in view

of the foregoing remarks, Applicants respectfully assert that claim 108 is allowable, thereby

obviating the need to amend claims 113 and 114. In view of the forgoing amendments and

remarks, reconsideration and withdrawal of the objection to these claims are therefore

respectfully requested.

Conclusion XVI.

All of the stated grounds of objection and rejection have been properly traversed,

accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner

reconsider all presently outstanding rejections and that they be withdrawn.

Applicants believe that a full and complete reply has been made to the outstanding

Office Action and, as such, the present application is in condition for allowance. If the

Examiner believes, for any reason, that personal communication will expedite prosecution of

this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Brian J. Del Buono Attorney for Applicants

Registration No. 42,473

1100 New York Avenue, N.W.

Suite 600

Washington, D.C. 20005-3934

(202) 371-2600

SKGF_DC1:70697.2

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Version with markings to show changes made

In the Claims:

The claims have been amended as follows:

- (a) Claims 1-6, 9-21, 23-34, 38, 39, 43-46, 55-68, 70-76, 101, 102 and 124-142 have been cancelled without prejudice to or disclaimer of the subject matter encompassed thereby.
- (b) Claims 7, 35, 40, 42, 69, 108 and 115 have been amended as follows:
- 7. (Once amended) A method of producing a population of hybrid nucleic acid molecules comprising:
 - (a) mixing at least a first population of nucleic acid molecules, wherein one or more nucleic acid molecules of said population comprises one or more recombination sites, with at least one target nucleic acid molecule comprising one or more recombination sites;
 - (b) causing some or all of the nucleic acid molecules of the at least first

 population to recombine with all or some of the target nucleic acid

 molecules, thereby forming the population of hybrid nucleic acid

 molecules; and

11

- (c) [The method of claim 1, further comprising] selecting for the population of hybrid nucleic acid molecules and against the first population of nucleic acid molecules and against the target nucleic acid molecules.
- 35. (Once amended) A method of cloning two or more nucleic acid segments, comprising:
 - (a) providing two or more nucleic acid segments, each segment flanked by two recombination sites which do not recombine with each other;
 - (b) providing a vector comprising a number of recombination sites equal

 to twice the number of nucleic acid segments, wherein each of the

 recombination sites is capable of recombining with one of the

 recombination sites flanking one of the nucleic acid segments; and
 - (c) conducting a recombination reaction such that the nucleic acid segments are recombined into the vector thereby cloning the nucleic acid segments,

[The method of claim 23,] wherein transcription of at least two of the nucleic acid segments results in the production of a single RNA.

40. (Once amended) The method of claim [38, wherein the] <u>35, wherein the nucleic acid segments comprise</u> one or more libraries [comprise] of nucleic acid molecules which encode variable domains of antibody molecules.

1

- 42. (Once amended) The method of claim [23] 35, further comprising screening to identify nucleic acid molecules which encode proteins having binding specificity for one or more antigens.
- 69. (Once amended) A method of joining two or more segments of nucleic acid, comprising:
 - (a) providing two or more segments of nucleic acid, each segment comprising at least one recombination site capable of recombining with a recombination site present on the other segment; and
 - (b) contacting the segments with one or more recombination proteins

 under conditions causing recombination between the recombination

 sites, thereby joining the segments,

[The method of claim 64,] wherein the expression product is a ribozyme or an inhibitory RNA molecule.

108. (Once amended) A method of synthesizing a protein comprising:

- (a) providing a nucleic acid molecule comprising at least one recombination site and comprising a coding sequence [followed by a] containing at least one supressible stop codon [, wherein the nucleic acid molecule is flanked by at least one recombination site];
- (b) providing a vector comprising at least one recombination site and a coding sequence;

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Ü

- (c) causing recombination <u>in vitro</u> such that the nucleic acid molecule is inserted into the vector to produce a modified vector with the two coding sequences connected in frame <u>and separated by said stop</u> codon;
- (d) transforming a host cell which expresses a suppressor tRNA with the modified vector; and
- (e) causing expression of the two coding sequences such that a fusion protein encoded by at least a portion of both of the coding sequences is produced [, wherein either the nucleic acid molecule or the vector comprises at least one suppressible stop codon].
- 115. (Once Amended) A method for determining the gene expression profile in a cell or tissue comprising:
 - (a) generating at least one population of cDNA molecules from RNA obtained from the cell or tissue, wherein [the individual] cDNA molecules of the population comprise at least [two] one recombination site capable of recombining with at least one recombination site present on [the individual members] cDNA molecules of the same or a different population [of cDNA molecules];
 - (b) contacting the nucleic acid molecules of (a) with one or more recombination proteins under conditions which cause the nucleic acid molecules to join; [and]

a

CHEO *et al.* Appl. No. 09/732,914

- 28 -

- (c) determining the sequence of the joined nucleic acid molecules; and
- (d) comparing the sequence of said joined nucleic acid molecules to

 nucleic acid sequences cataloged in public databases to identify the

 gene expression profile.
- (c) New claims 143-150 have been added.